CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

Job No.: CQCE/BBMP/RK/W.No.13/2019-20 Date: 24.07.2019

TEST REPORT

CLIENT	:	**Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Sri. Ravikumar,** Contractor, Bangalore..
NAME OF THE WORK	:	Providing RO Plant in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
SAMPLE ID	:	Cement (Dalmia OPC 53 Grade)
DATE OF MANUFACTURE	:	June -2019
DATE OF TESTING	:	22.07.2019 to 24.07.2019
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part -5)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	435 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	30.00 %	-

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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ಎಸ್.ಎಂ ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

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IAS-ANZ ISO 9001:2008 CERTIFIED

Job No.: CQCE/BBMP/RK/W.No.13/2019-20 Date : 24.07.2019

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency : **Sri. Ravikumar,** Contractor, Bangalore..
Name of Work : Providing RO Plant in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Date of Testing : 24.07.2019
Material : Sand Total wt. of aggregates in gms = **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	84	8.40	8.40	91.6	90-100
2.36	162	16.20	24.60	75.4	75-100
1.18	158	15.80	40.40	59.6	55-90
600 Micron	146	14.60	55.00	45.0	35-59
300 Micron	289	28.90	83.90	16.1	8-30
150 Micron	126	12.60	96.50	3.5	0-10

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Job No.: CQCE/BBMP/RK/W.No.13/2019-20 Date: 22.08.2019

TEST REPORT ON CEMENT MORTAR CUBES

Client : **Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Contractor : **Sri. Ravikumar,** Contractor, Bangalore..

Name of the work : Providing RO Plant in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.

Sample ID : Cement Mortar

Size of cubes : 50mmx50mmx50mm

Cross Sectional Area : 2500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008) & IS: 2250-1981

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.07.2019	22.08.2019	0.789	132.6	53.04
2	25.07.2019	22.08.2019	0.765	133.5	53.40
3	25.07.2019	22.08.2019	0.778	135.8	54.32

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ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/RK/W.No.13/2019-20 10.08.2019

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency : **Sri. Ravikumar,** Contractor, Bangalore..
Name of the work : Providing RO Plant in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Sample ID : Cement Concrete
Size of cubes : 150mmx150mmx150mm
Cross Sectional Area : 22500 mm^2
Technical Reference : IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete : M_{15}
Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	03.08.2019	10.08.2019	8.125	285.9	12.71
2	03.08.2019	10.08.2019	8.131	265.8	11.81
3	03.08.2019	10.08.2019	8.129	276.2	12.28

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Job No:CQCE/BBMP/RK/W.No 13/2019-20

17.08.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Sri. Ravikumar,** Contractor, Bangalore..
Name of Work	Providing RO Plant in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Sample ID	WMM Layer
Date of Testing	17.08.2019

Result : Flakiness Index = **12.21%**

Elongation Index = **13.85%**

Result : Combined Flakiness & Elongation index **26.06%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Job No.: CQCE/BBMP/RK/W.No.13/2019-20

29.08.2019

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client	: **Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	: **Sri. Ravikumar,** Contractor, Bangalore..
Name of the work	: Providing RO Plant in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{30}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.08.2019	29.08.2019	8.258	526.3	23.39
2	22.08.2019	29.08.2019	8.265	500.2	22.23
3	22.08.2019	29.08.2019	8.281	515.8	22.92

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Job No.: CQCE/BBMP/RK/W.No.13/2019-20

Test Report Of Glazed Stoneware Pipes

Client	**Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Sri. Ravikumar,** Contractor, Bangalore..
Name of the work	Providing RO Plant in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Type of Sample	**Salt Glazed Stoneware Pipe(230mm dia)**
Techinical Reference	**As Per IS-651:2007 (VI revision)**
Date of Testing	30.08.2019

Sl no	Internal Diameter	Thickness of Pipe	% absorption	% of Acid Resistance	Crushing Strength kN/m
1	230mm	16mm	4.2	1.68	16.92
2	230mm	16mm	5.5	1.65	17.28
3	230mm	16mm	4.8	1.62	16.30
Requirements as per IS-651:2007(VI Revision)	-----	----	**Maximum 6%**	**Not Exceed 2.5%**	**Minimum 16kN/m**

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